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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,514	06/09/2006	Hiroshi Kigawa	290248US3PCT	2904
22850 7590 11/17/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
CHAN, KAWING				
ART UNIT		PAPER NUMBER		
2837				
NOTIFICATION DATE		DELIVERY MODE		
11/17/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/582,514

**Applicant(s)**

KIGAWA ET AL.

**Examiner**

Kawing Chan

**Art Unit**

2837

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 7, 8 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-19 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The Amendments and Applicant Arguments submitted on 08/13/09 have been received and its contents have been carefully considered. The examiner wishes to thank the Applicant for the response to the Examiner's action and for amending the claims in the appropriate manner.

Claims 5-6 and 9-10 were previously withdrawn from consideration.

Claims 18-19 are newly added.

Claims 1-4, 7-8 and 11-19 are pending for examination.

***Claim Objections***

2. The objection to claim 12 has been removed in response to Applicant's amendments.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pramanik et al. (US 5,299,661) in view of Angst (US 2004/0173413 A1), Stelzer (US 3,012,634) and Hwang (KR 2001105482 A).

In Re claim 1, Pramanik discloses an emergency stop system for an elevator (10) (Abstract), Comprising:

- A governor rope (18) that moves in synchronism with raising and lowering of the car (10) and is wound around a governor sheave (Figure 1);
- A rope catching device (20) (Abstract & Figure 1) and a restraining portion (111a, 123a) (Col 3 lines 35-45);
- A braking portion (34, 36) (Figures 1-4) mounted in the car (10) and having a braking member (70) capable of coming into and out of contact with a guide rail (12) for guiding the car (10), the braking portion (34, 36) braking the car (10) by pressing the braking member (70) against the guide rail (12) when the governor rope (18) is restrained and the car (10) is displaced with respect to the governor rope (18) (Abstract, Col 4 line 20 to Col 6 line 63).

Pramanik fails to disclose a detection portion (although inherent), a control portion, and the rope catching device comprises an electromagnetic actuator, which is activated by an activation signal.

However, with reference to Figures 1 and 4, Angst discloses a detection portion for detecting a speed (24) and a position (21) of a car (Paragraph [0031]), a control portion (15) having a storage portion (24) that stores, in correspondence with the position of the car, an overspeed setting level (Paragraphs [0033, 0034]) set to be a

value larger than the speed of the car during normal operation (Figures 2-5 & 7-8), the control portion (102) outputting an activation signal when the speed of the car becomes higher than the overspeed setting level at the position of the car obtained based on information from the detection portion (24), and the overspeed setting level progressively varies based on a distance between the position of the car and a service floor (Figures 2-5 & 7-8).

Nevertheless, with reference to Figures 1, 6 and 7, Stelzer discloses rope catching device having an actuator (solenoid 92), a restraining portion (Figure 6) that restrains the governor rope (tape 30) (restrain the tape by preventing rotation of drum 20) upon activation of an actuator (solenoid 92), and a ratchet gear (85) rotated integrally with the governor sheave (20) (Col 2 lines 24-31; Col 3 lines 40-51);

Stelzer fails to explicitly disclose the solenoid is activated upon input of the activation signal.

In addition, Hwang discloses rope catching device (Figures 4 & 6) having an electromagnetic actuator (26) that is activated upon input of the activation signal (Abstract).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Pramanik with the teachings of Angst, Stelzer and Hwang, since it is known in the art to utilize position and speed monitoring devices in an elevator control system so as to be able to evaluate the speed status of the elevator car based on the predetermined speed limit at different positions; it is also known in the art to utilize a solenoid to activate a safety device of an

elevator system so that the activation of the safety device can be controlled by energizing or de-energizing the solenoid; and it is also known in the art to utilize activation signal to control the operation of the solenoid so that the solenoid can be activated upon request.

In Re claim 2, Angst teaches a hoistway in which the car is raised and lowered is provided with a zone in which the car is accelerated or decelerated during normal operation and which adjoins the service floor for the car (Figures 2-5 & 7-8); and overspeed setting level in the zone is set to become progressively smaller toward the service floor (Figures 2-5 & 7-8).

In Re claim 3, with reference to Figure 1A, Angst teaches a reference position detecting portion (20) is provided in the zone, for detecting a position that serves as a reference for detecting the position of the car by the detection portion (21) (Paragraph [0031]).

In Re claim 11, Angst discloses a hoistway in which the car is raised and lowered includes a first speed changing zone, a constant speed zone, and a second speed changing zone (Figures 2 & 3), the overspeed setting level (28) becomes progressively smaller toward the service floor when the car is in the first speed changing zone or the second speed changing zone, and the overspeed setting level is constant when the car is in the constant speed zone (Figures 2 & 3).

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pramanik et al. (US 5,299,661) in view of Angst (US 2004/0173413 A1), Stelzer (US 3,012,634)

and Hwang (KR 2001105482 A) as applied to claim 1 above, and further in view of Muller (US 2004/0079591 A1).

In Re claim 4, Pramanik, Angst, Stelzer and Hwang have been discussed above, but they fail to disclose the detection portion is provided to a governor sheave around which the governor rope is wound.

However, with reference to Figure 2, Mueller teaches the detection portion (110) is provided to a governor sheave (speed governor) around which the governor rope (cable) is wound (Paragraphs [0047, 0064, 0065]).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Pramanik, Angst, Stelzer and Hwang with the teachings of Muller, since it is known in the art to provide a detection portion to a governor sheave so that the speed of the of the elevator can be determined by the number of rotation of the governor sheave.

6. Claims 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pramanik et al. (US 5,299,661) in view of Angst (US 2004/0173413 A1), Stelzer (US 3,012,634) and Hwang (KR 2001105482 A) as applied to claim 1 above, and further in view of Iijima (US 5,686,707).

In Re claim 12, Pramanik, Angst, Stelzer and Hwang have been discussed above, Angst further discloses the overspeed setting level (28) stored in the storage portion (24.2) includes a first overspeed pattern (28.1) and a second overspeed pattern (28.2), and each of the normal speed pattern (27), first overspeed pattern (28.1) and

second overspeed pattern (28.2) progressively vary based on the distance between the position of the car and the service (Figures 7 & 8; Paragraph [0041]).

Pramanik, Angst, Stelzer and Hwang fail to disclose the normal speed pattern is stored in the storage portion.

However, Iijima discloses the normal speed pattern (speed pattern of the cage from a starting floor to a stop floor) is stored in a storage portion (31) of an elevator control system (Col 3 lines 16-46).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Pramanik, Angst, Stelzer and Hwang with the teachings of Iijima, since it is known in the art to store the previous speed pattern of an elevator car so as to be able to adjust the speed of the car on the basis of the previously stored speed pattern.

In Re claim 13, Angst discloses a hoistway in which the car is raised and lowered includes a first speed changing zone, a constant speed zone, and a second speed changing zone (Figures 2 & 3), each of the normal speed pattern (27), the first overspeed pattern (28.1), and the second overspeed pattern (28.2) becomes progressively smaller toward the service floor when the car is in the first speed changing zone or the second speed changing zone (Figures 7 & 8), and each of the normal speed pattern, the first overspeed pattern, and the second overspeed pattern is constant when the car is in the constant speed zone (Figures 2, 3, 7 & 8).

In Re claim 14, Angst inherently discloses the control portion (15) is configured to set a normal speed of the car based on the normal speed pattern (27), activate a normal



brake when the speed of the car becomes higher than first overspeed level (28.1) (Paragraph [0041]), and output the activation signal when the speed of the car becomes higher than the second overspeed level (28.2) (Paragraph [0041]).

In Re claim 15, Angst discloses the second overspeed pattern (28.2) is greater than the first overspeed pattern (28.1) and the first overspeed pattern (28.1) is greater than the normal speed pattern (27) at each position of the car (Figures 7 & 8).

In Re claim 16, Angst discloses a difference between the first overspeed pattern (28.1) and the normal speed pattern (27), and a difference between the second overspeed pattern (28.2) and the first overspeed pattern (28.1) are each set to be substantially constant at each position of the car (Figures 3, 7 & 8). Although Figures 7 & 8 do not show the overspeed pattern (28.1 & 28.2) vary along with the normal speed pattern at the beginning portion, it would have been obvious to one skilled in the art to have overspeed pattern vary along with the normal speed pattern since Angst also suggests the same in Figure 3.

In Re claim 17, Angst discloses the control portion is configured to compute the overspeed setting level (speed limit values being continuously calculated) each time the elevator travels (dependent on the position, travel progress of the elevator and speed reduction when stopping at floors) (Figure 3; Paragraph [0020]).

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pramanik et al. (US 5,299,661) in view of Angst (US 2004/0173413 A1), Hwang (KR

2001105482 A) and Kugiya et al. (WO 03029123 A1) (hereinafter US 7,228,943 B2 is used as equivalent translation of WO 03029123 A1 in the rejection).

In Re claim 18, Pramanik discloses an emergency stop system for an elevator (10) (Abstract), Comprising:

- A governor rope (18) that moves in synchronism with raising and lowering of the car (10) (Figure 1);
- A rope catching device (20) (Abstract & Figure 1) and a restraining portion (111a, 123a) (Col 3 lines 35-45);
- A braking portion (34, 36) (Figures 1-4) mounted in the car (10) and having a braking member (70) capable of coming into and out of contact with a guide rail (12) for guiding the car (10), the braking portion (34, 36) braking the car (10) by pressing the braking member (70) against the guide rail (12) when the governor rope (18) is restrained and the car (10) is displaced with respect to the governor rope (18) (Abstract, Col 4 line 20 to Col 6 line 63).

Pramanik fails to disclose a detection portion (although inherent), a control portion, the rope catching device comprises an electromagnetic actuator (which is activated by an activation signal), the difference between the first overspeed pattern and the normal speed pattern, and the difference between the second overspeed pattern and the first overspeed pattern.

However, with reference to Figures 1 and 4, Angst discloses a detection portion for detecting a speed (24) and a position (21) of a car (Paragraph [0031]), a control portion (15) having a storage portion (24) that stores, in correspondence with the

position of the car, an overspeed setting level (Paragraphs [0033, 0034]) set to be a value larger than the speed of the car during normal operation (Figures 2-5 & 7-8), the control portion (102) outputting an activation signal when the speed of the car becomes higher than the overspeed setting level at the position of the car obtained based on information from the detection portion (24), and the overspeed setting level progressively varies based on a distance between the position of the car and a service floor (Figures 2-5 & 7-8).

Nevertheless, Hwang discloses rope catching device (Figures 4 & 6) having an electromagnetic actuator (26) that is activated upon input of the activation signal (Abstract), and a restraining portion (20) that restrains the governor rope upon activation of the electromagnetic actuator (36) (Abstract; Claim 1).

Nevertheless, Kugiya discloses a difference between the first overspeed pattern (125) and the normal speed pattern (rated speed) at a first position of the car is set to be equal to a difference between the first overspeed pattern and the normal speed pattern at every other position of the car, and a difference between the second overspeed pattern (126) and the first overspeed pattern at the first position of the car is set to be equal to a difference between the second overspeed pattern and the first overspeed pattern at every other position of the car (Figure 4).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Pramanik with the teachings of Angst, Hwang and Kugiya, since it is known in the art to utilize position and speed monitoring devices in an elevator control system so as to be able to evaluate the

speed status of the elevator car based on the predetermined speed limit at different positions; it is also known in the art to utilize a solenoid to activate a safety device of an elevator system so that the activation of the safety device can be controlled by energizing or de-energizing the solenoid; and it is also known in the art to adjust the speed limit level based on the travel progress of the elevator (speed limit level is lower in the acceleration and deceleration regions) so that the speed of the elevator is controlled to be within acceptable limit in any time.

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pramanik et al. (US 5,299,661) in view of Angst (US 2004/0173413 A1) and Hwang (KR 2001105482 A).

In Re claim 19, Pramanik discloses an emergency stop system for an elevator (10) (Abstract), Comprising:

- A governor rope (18) that moves in synchronism with raising and lowering of the car (10) (Figure 1);
- A rope catching device (20) (Abstract & Figure 1) and a restraining portion (111a, 123a) (Col 3 lines 35-45);
- A braking portion (34, 36) (Figures 1-4) mounted in the car (10) and having a braking member (70) capable of coming into and out of contact with a guide rail (12) for guiding the car (10), the braking portion (34, 36) braking the car (10) by pressing the braking member (70) against the guide rail (12) when the

governor rope (18) is restrained and the car (10) is displaced with respect to the governor rope (18) (Abstract, Col 4 line 20 to Col 6 line 63).

Pramanik fails to disclose a detection portion (although inherent), a control portion, and the rope catching device comprises an electromagnetic actuator, which is activated by an activation signal.

However, with reference to Figures 1 and 4, Angst discloses a control portion (15, 24.1) configured to compute (speed limit values being calculated continuously by microprocessor integrated in the speed monitoring device), each time the car travels (Figure 3: depending on the position and travel progress of the elevator, and the speed reduction when stopping at floors) (Paragraph [0020]), a relationship between the position of the car and the speed of the car as an overspeed setting level (Paragraphs [0033, 0034]) set to be a value larger than the speed of the car during normal operation (Figures 2-5 & 7-8), the control portion (102) outputting an activation signal when the speed of the car becomes higher than the overspeed setting level at the position of the car obtained based on information from the detection portion (24), and the overspeed setting level progressively varies based on a distance between the position of the car and a service floor (Figures 2-5 & 7-8).

Nevertheless, Hwang discloses rope catching device (Figures 4 & 6) having an electromagnetic actuator (26) that is activated upon input of the activation signal (Abstract), and a restraining portion (20) that restrains the governor rope upon activation of the electromagnetic actuator (36) (Abstract; Claim 1).

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Pramanik with the teachings of Angst and Hwang, since it is known in the art to utilize position and speed monitoring devices in an elevator control system so as to be able to evaluate the speed status of the elevator car based on the predetermined speed limit at different positions; and it is also known in the art to utilize a solenoid to activate a safety device of an elevator system so that the activation of the safety device can be controlled by energizing or de-energizing the solenoid.

***Allowable Subject Matter***

9. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The cited prior art do not teach or suggest limitation the restraining portion is a pressing member capable of displacement into and out of contact with the governor sheave; and the pressing member is pressed against the governor sheave through the governor rope upon activation of the electromagnetic actuator. The combinations of the claimed limitations in claim 7 and all the limitations recited in its parent claims are not anticipated or made obvious by the prior art of record in the examiner's opinion.

***Response to Arguments***

10. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kawing Chan whose telephone number is (571)270-3909. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. C./  
Examiner, Art Unit 2837

/Walter Benson/  
Supervisory Patent Examiner, Art Unit 2837